We Keep Virginia Moving VDOT

Rev 3-26-07

NORTHERN REGION
SPECIAL PROVISIONS FOR TRAFFIC SIGNAL CONSTRUCTION

Guidelines for Traffic Signal Timing Plan Submission Process

Traffic signal timing plans must be submitted to the VDOT Permits Section with the first submission of the approved signal design plans.

The developer shall be responsible for all changes required for timing plan approval.

The traffic signal shall **not be activated** until the timing plans have been reviewed and approved by the VDOT Northern Region Operations Manager for traffic signals.

Guidelines for signal timing plan development:

- The Department shall provide the developer with the existing base Synchro files for the adjacent signalized intersections. Base files will range from Version 3.2 to the current version.
- The Developer shall add proposed changes to the existing file. No changes shall be made to the adjacent intersections in the files, unless directed by the Operations Manager.
- The Developer is responsible for collecting, entering, and evaluating all signal related data (i.e. traffic counts, lane configuration, phasing, detector placements, pedestrian movements, storage bay lengths, etc.)
- Clearance times will be calculated based on the new standards specified in VDOT TE-306 Memorandum with NOVA revisions. The Developer shall furnish to the Department the documentation used in calculating these timings.
- If the proposed signal is located between existing coordinated signalized intersections, the proposed signal should operate in coordination with the existing coordinated signalized intersections. However, if the proposed signal is isolated from surrounding existing signalized intersections, it may be placed in free operation. Free operation request of the new traffic signal is subject to approval by the VDOT Operations Manager for traffic signals.
- If the proposed signal is located between existing coordinated signalized intersections, timing plans for five times of day periods (AM, Midday, PM, Off-peak, and Weekend) should be submitted for review and approval by the Operations Manager.

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1. Prior to construction, approved signal plans, signal installations and modifications may require additional detailed information. Specifically, the suitability of poles and pole foundations is required; for new foundations, this entails shop drawings for the poles, results from soil tests and the final foundation design. For modifications that increases the current load, certification of the pole and foundation is required.

2. Any supplemental information is to be submitted to the appropriate Permits Section approving this permit. The Permits Section will forward to Traffic Engineering or other appropriate VDOT sections. All information will be reviewed and must be stamped "review complete" by Traffic Engineering prior to commencement of any work on the poles or foundations. Refer to the VDOT Road and Bridge Specifications and all applicable Special Provisions relating to traffic signals.

3. No deviation from the plans is allowed without prior authorization from the appropriate Permits Section.

4. Under a signal modification, the developer shall be responsible for any conflicts in the existing signal or roadway caused by the modification.

5. Signal plans are only valid for one year from date of approval. Plans with expired approvals must be re-submitted to the Permits Section to forward to Traffic Engineering for review.

6. Contractors must notify the appropriate Permits Section in writing five working days prior to commencing any work at any signalized locations in the Northern Region. The contractor is required to provide daytime phone number and emergency phone numbers of persons to contact in case emergency repairs are needed to the traffic signal. This notification is to include, permit number under which the installation/modification is being made, route numbers and location.

7. VDOT is not part of Miss Utility. Any cable marking or locating of traffic signal equipment is performed by VDOT. The contractor is required to notify Permits Section in writing to request for cables and equipment to be marked if the contractor is working within 1,000 feet of a traffic signal. Permits Section will forward to the appropriate section to have the cable marked. No work shall be performed by the contractor until the cables have been marked and cleared for construction.

8. Once signal work has commenced, the contractor assumes complete maintenance responsibility. The Signal Contractor is responsible for all repairs and maintenance of the traffic signal. The contractor is responsible for communication and power to the traffic signal.

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9. The response time for malfunctioning equipment shall be one hour for the following types of malfunctions:
   - Traffic Signal completely out
   - Traffic signal not cycling properly (locked in one phase)
   - Traffic signal skipping a phase
   - Traffic signal on flash
   - No amber/amber too short/amber bulb out
   - Red or green bulb out for an exclusive, or five section, left turn signal head
   - Twisted signal head
   - Any call for service where police of fire personnel are controlling the intersection with point traffic control

   All other malfunctions shall be repaired within four hours of receipt of complaint.

10. All requests for inspections must be through the appropriate Permit Section. The four inspections required with signal installation shall be:

    A. Foundation inspection. This inspection shall be done prior to the pouring of any concrete. The foundation must be inspected and certified by an independent inspector provided by the developer. Prior to acceptance of the signal, an installation certification provided by a Professional Engineer, licensed in Virginia, shall be provided to VDOT Permits Section. The certification must include a statement indicating that the rebar and concrete is as prescribed on the approved foundation design. It shall also state the foundation has been installed in accordance with the approved plans and VDOT Standards and specifications. Concrete test cylinders for testing purposes must be performed and is the responsibility of the contractor.

    B. The service Inspection. This is to ensure satisfactory electrical service. A written request for electrical service inspection must be submitted ten (10) working days in advance. The request must include the permit number, route number, and the intersection of the signal. The contractor shall provide a letter of certification from the company performing wiring, programming or testing that the controller cabinet was wired, programmed and tested for the intersection where it will be installed. The particular intersection shall be specifically indicated in the in the certification.

    C. Turn on (pre-inspection) prior to full color activation. No signal will be placed into flashing operation until it is 100% complete. This includes ancillary improvements such as but not limited to road construction, pavement markings and signs. This inspection must be scheduled in

writing ten (10) working days is advance and must include the permit number, route number and intersection of signal.

- No signal will be activated (Flashing or full color) without VDOT approval
- A minimum of 72 hours flashing operation is to precede any full color operation
- Signal installation will not be placed into full color operation on Mondays, Fridays, holidays or days preceding or following holidays

D. Final inspection. A final inspection shall be done after 30 days of continuous error free full color operation. A written request to the Permits Section must be submitted ten (10) working days in advance. The request must include permit number, route number and location. As-built plans are required prior to final inspection if changes have been made. The as-built plans must be reviewed and approved prior to final acceptance by the Permits Section. Reproducible as built plans including digital copy must be provided prior to permit release.